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(71) Applicant: **FUTURA SOLAR, INC.** [US/US]; 3536 University Boulevard North, Jacksonville, FL 32277 (US).

(72) Inventor: **O'LEARY, Patrick**; 3536 University Boulevard North, Jacksonville, FL 32277 (US).

(74) Agents: **ROBERTS, Jon, L.** et al.; Roberts, Abokhair & Mardula, LLC, Suite 1000, 11800 Sunrise Valley Drive, Reston, VA 20191 (US).

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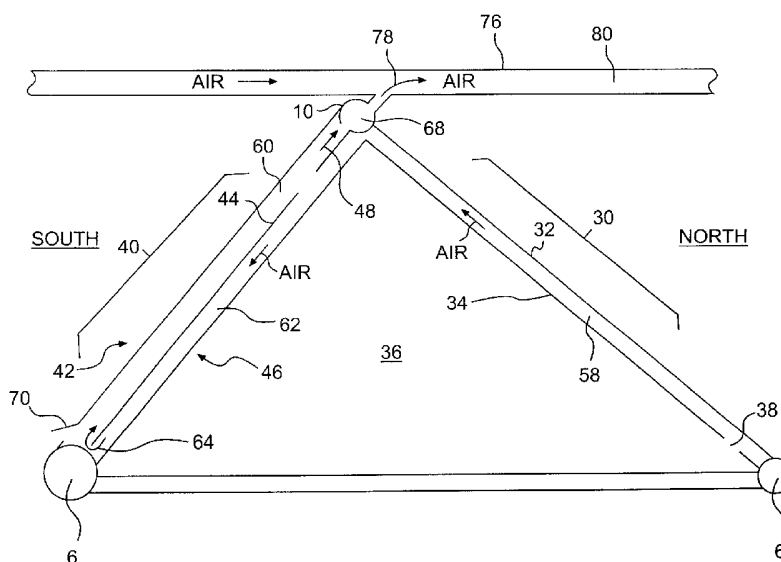
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **STRUCTURALLY INTEGRATED SOLAR COLLECTOR**



(57) Abstract: A structurally integrated solar collector (8, 20, 22, 24, 26, 28, 30). Roof and wall covering components are integrated with solar collectors to permit solar energy to be converted to heat, electricity and hot water for use within a building. A roof truss (8) is described that additionally captures sunlight for illuminating a building. The roof and wall components are adaptable to heating and cooling seasons so as to minimize the loss of air-conditioned air in the summer time and to maximize solar heating during cold months. Solar energy captured by a structurally integrated solar collector can be directly converted to electricity through use of photovoltaic materials or by harnessing airflow through the structurally integrated solar collector to obtain electricity through mechanical conversion.

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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US02/31231

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : F24J 02/00

US CL : 52/173.3, 126/621, 623, 629, 633, 906; 136/206, 251; 323/906; 165/48.2

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 52/173.3, 126/621, 623, 629, 633, 906; 136/206, 251; 323/906; 165/48.2

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
Please See Continuation Sheet

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4,300,532 A (OLSEN) 17 November 1981, (17.11.1981), see device 10.	8, 15
X	US 4,416,255 A (SECAMIGLIO et al.) 22 November 1983, (22.11.1983), see figure 2 and its description.	8, 15
X	US 4,494,528 A (HORTON) 22 January 1985, (22.01.1985), see figure 3.	8, 15
A	US 3, 919,998 A (PARKER) 18 November 1975, (18.11.1975), see entire document.	1-21
A	US 4,108,155 A (KOIZUMI et al.) 22 August 1978, (22.08.1978), see entire document.	1-21
A	US 4,169,459 A (EHRlich) 02 October 1979, (10.02.1979), see entire document.	1-21
A	US 5,589,006 (ITOYAMA et al.) 31 December 1996, (31.12.1996), see entire document.	1-21
A	JP 59-74458 A (YAMASHITA et al.) 26 April 1984, (26.04.1984), see figure 4.	1-21

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

\* Special categories of cited documents:

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Mail Stop PCT, Attn: ISA/US  
Commissioner for Patents  
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Facsimile No. (703) 305-3230

Authorized officer

for Robert J Canfield

Telephone No. 703-308-2168

# INTERNATIONAL SEARCH REPORT

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## Continuation of B. FIELDS SEARCHED Item 3:

EAST

forward and backward citation searches during classification search

text search: ((collector with photovoltaic) and (solar) and (air))